

Essential Newborn Care

2020 KRCHN (B) CLASS

By: Everlyn Abuga

Objectives

1. Define Essential Newborn Care (ENC)
2. List the 4 basic needs of all newborns
3. Describe the ENC interventions
4. Explain the components of “warm chain” and “clean chain”
5. Describe the immediate & subsequent care that should be given to the normal newborn
6. Describe the 1st examination of a newborn

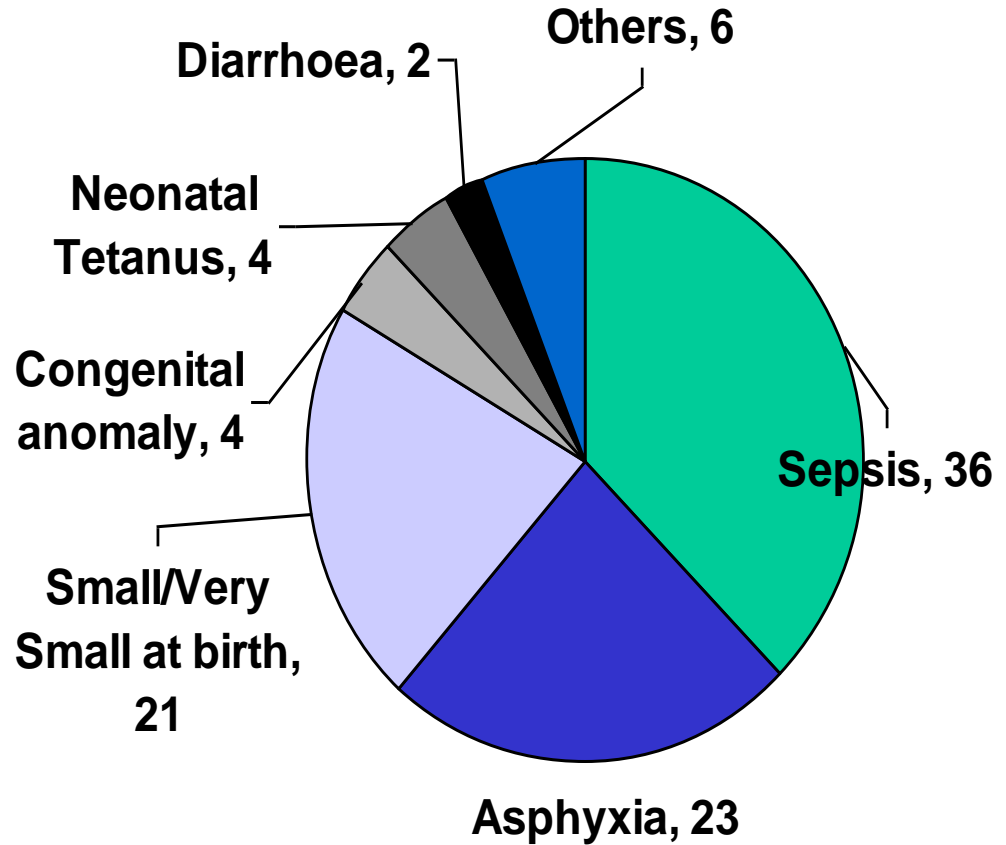
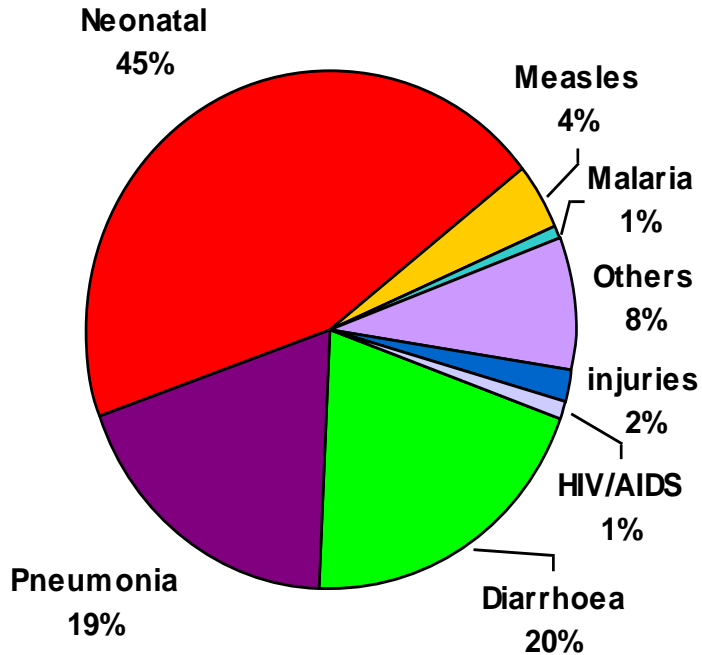
Definition

- Basic care given to a newborn to support their survival and wellbeing.
 - Majority of babies are born healthy and at term
 - Care during first hours, days and weeks of life determine whether they remain healthy

Why ENC?

- ✓ As a midwife, you should realize that the neonatal period is a very hazardous period.
- ✓ Statistics show that;
 - Two thirds of infant deaths occur in the neonatal period.
 - More than half of these deaths occur in the first 48 hours and three quarters in the first week of life.
- ✓ Therefore, the midwife's responsibility is **to minimize these deaths through efficient management of the infant.**

Major causes of Under 5 mortality



Causes of Neonatal Deaths

Four basic needs of ALL newborns

- 1. To breath normally**
- 2. To be protected**
- 3. To be warm**
- 4. To be fed**

Essential Newborn Care Interventions

- **Clean childbirth and cord care**
 - *Prevent newborn infection*
- **Thermal protection**
 - *Prevent & manage newborn hypo/hyperthermia*
- **Early and exclusive breastfeeding**
 - *Started within 1 hour after childbirth*
- **Initiation of breathing and resuscitation**
 - *Early asphyxia identification and management*

Components of ENC

- Immediate care at birth,
- Subsequent Care - Care during the first day and up to 28 days (*neonatal period*)

Immediate Care of the newborn at birth

(Until around 1 hour after birth)

- Provide routine care at birth for all newborns
- Identify and manage newborns who may need special care

Routine Care

- Call out **time** of birth
- **Place baby on mother's abdomen**
- **Dry** baby with warm clean sheet
- Wipe mouth and nose with clean cloth
- **Assess baby's breathing while drying**
- Clamp cord after 1-3 min, cut with sterile instrument, put sterile tie
- Put identity label on the baby

Routine Care

- Examine for malformations/ birth injury
- Initiate breast feeding within 1 hour
- Record baby's weight
- Administer Inj. Vit K 1mg IM (0.5 mg for preterm) & TEO
- Cover baby's head with cloth.
- Cover mother and baby with warm cloth

Immediate newborn care

Immediate newborn care should be given in the following sequence;

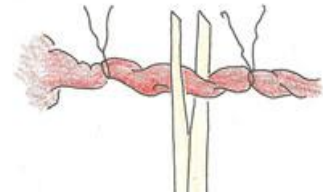
1. Clearing the airway
2. Immediate cord care
3. Provision of warmth
4. Identification
5. Assessment – APGAR scoring
6. Weighing & 1st examination

1. Clearing the airway

- During delivery of the baby's head, excess mucus may be wiped gently from the mouth.
- Immediately the baby is born;
 - ✓ Wipe the mouth gently with a sterile gauze swab.
 - ✓ Hold head slightly slanting for a short period, to facilitate drainage of mucus & liquor that may have been swallowed
 - ✓ *Note the time of birth*
- The baby is stimulated to cry in order to take its first breath.

2. Immediate cord care

- The baby is laid across the mother's abdomen as the cord is **clamped, ligated and cut after 1-3 mins**
- Clamp and cut cord with a sterile instrument.
- Tie the cord between 2 to 3 cms from the base and cut the remaining cord.
- Umbilical stump must be inspected after 2-4 hours of clamping.
 - Bleeding may occur at this time due to shrinkage of cord and loosening of ligature
- Immediately Apply Chlorhexidine ointment to the stump (*as per hospital protocol*).
- DO NOT bind or bandage stump.
- Leave stump uncovered.



3. Provision of warmth

- Show the baby to the mother for identification of their gender
- Wipe the head & face of the baby and the whole body so that heat is not lost
- Place the baby on the mothers abdomen for skin to skin contact, or hand over to your assistant with a warm towel
- Wrap the baby in warm clothes, give the baby to the mother, or put it in a warm Resuscitaire or cot, head being slightly lower to facilitate drainage of secretions if any
- Maintain the **WARM CHAIN**

Warm chain

1. Warm delivery room
2. Immediate drying
3. Warm resuscitation
4. Skin to skin contact at birth
5. Breastfeeding
6. Appropriate warm clothing
7. Bathing postponed
8. Mother and baby together
9. Warm transportation
10. Training & awareness raising

4. Identification

- Ensure that the baby has an identification wristlet (label), which should be put on before he leaves the delivery room

- Weigh the baby
- The label should indicate;
 - Names of the mother
 - IP Number
 - Sex of the baby
 - Date and time of delivery
 - *Birth weight*

5. Assessment

- Assessment of the newborn's general condition is done to determine if extra medical care or emergency care is needed.
- This assessment comprises 5 components & is known as **APGAR** score;
 - **A - Appearance (color)**
 - **P - Pulse(heart rate)**
 - **G - Grimace (response to stimuli)**
 - **A - Activity (muscle tone)**
 - **R - Respiratory effort (breathing)**

APGAR scoring.....

- Each component is given a score of 0,1 or 2
- The baby is scored at one minute after birth, at five minutes and then ten minutes (PRN).
- **A normal baby has an APGAR score of 10 at one minute and 10 at five minutes.**(written as a fraction)
 - **Normal score : 7 -10**
 - **Approx. 70% of newborns score 7 or better.**
- *Remember: A score at five minutes gives a more accurate prediction regarding survival. A low score at five minutes is, therefore, more serious than a low score at one minute after birth. Notify pediatrician if score is six or below at five minutes*

How to score the baby

Sign/scores	0	1	2
Appearance/color	Pale/blue	Pink body, blue extremities (Acrocyanosis)	Completely pink
Pulse/heart rate	Absent	< 100 beats/min	> 100 beats/min
Grimace/response to stimuli	Absent	Facial grimace	Cry, cough or sneeze
Activity/muscle tone	Limp	Some flexion of limbs	Active movement
Respiratory effort/breathing	Absent	Slow irregular breathing/ weak cry	Strong cry

Activity

- Baby X is a male infant born at term. On assessment, he has blue extremities, his Heart Rate is 90 beats/min. On stimulation, he cries weakly, flexes his limbs and has a slow irregular breathing pattern
- Calculate his APGAR score

Resuscitation

- **All babies must be assessed for need of resuscitation at birth**
- At least 1 person skilled in providing resuscitation must be present
- Ventilation must start within 1 minute of birth (1st golden minute)
 - *If no breathing: 5 inflation breaths then assess for HR; if absent, give 3 compressions to 1 breath*

Immediate care.....

- Observe the breathing and colour of the baby constantly, and the cord for any oozing
- **Allow the baby to rest for one hour before any other procedure is done**
- Apply TEO 1% to prevent ophthalmic neonatorum
- Administer Vitamin K inj. 1mg IM (0.5mg for preterm) **ON** the thigh, to reduce risk of VKDB

- Perform physical examination of the baby

1st general/physical examination of the newborn

Aims

- To determine maturity of the baby
- To exclude congenital abnormalities
- To detect any birth injuries

Requirements

- A Warm Environment
- Good Light
- Swabs In a gallipot
- Tape Measure
- Stethoscope
- Gloves
- Clinical Thermometer
- Lubricant
- Weighing Scale
- Second Hand Watch

1st Exam of the newborn

Perform a head-to-toe physical examination;

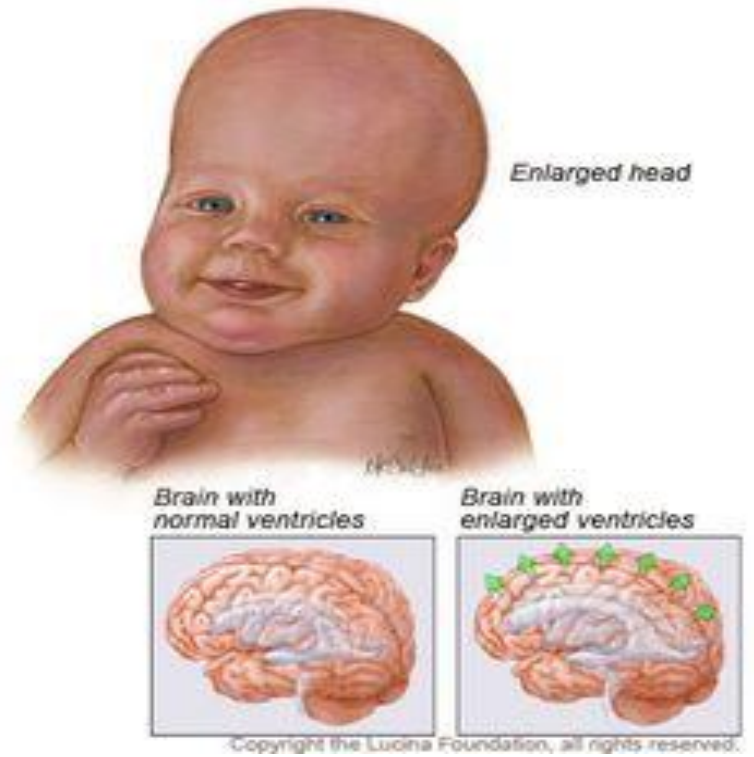
- Head & neck
- Eyes
- Ears
- Nose
- Mouth
- Chest
- Abdomen
- Extremities (arms, legs, palms, feet)
- Reflexes (Primitive & Protective)



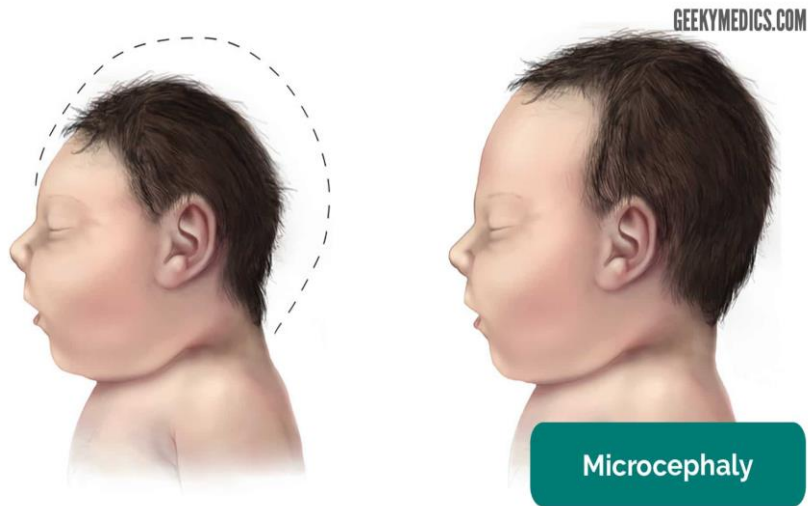
Moulding



Hydrocephalus



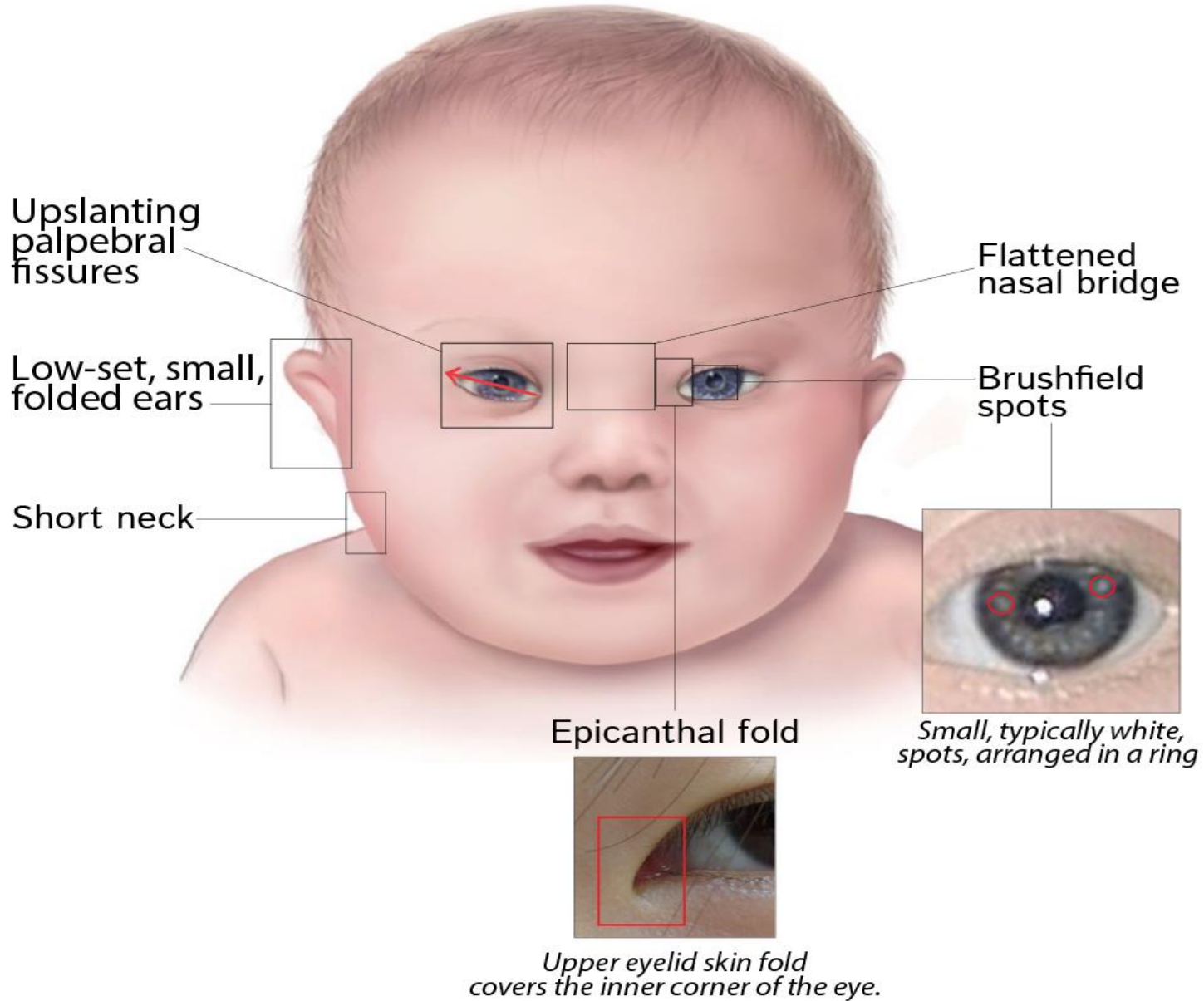
Microcephaly



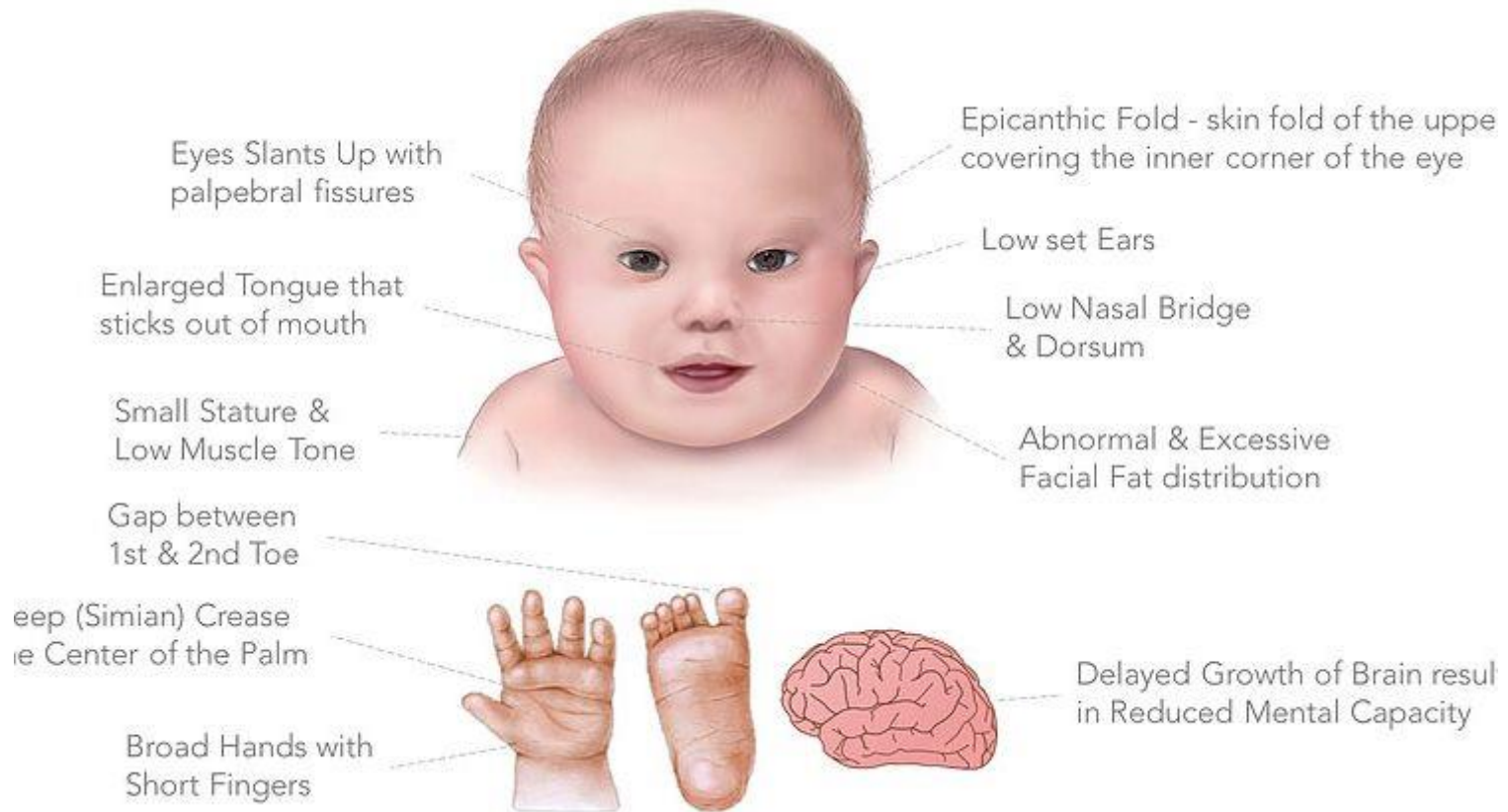
Brachycephaly



Key Facial Characteristics of Down Syndrome

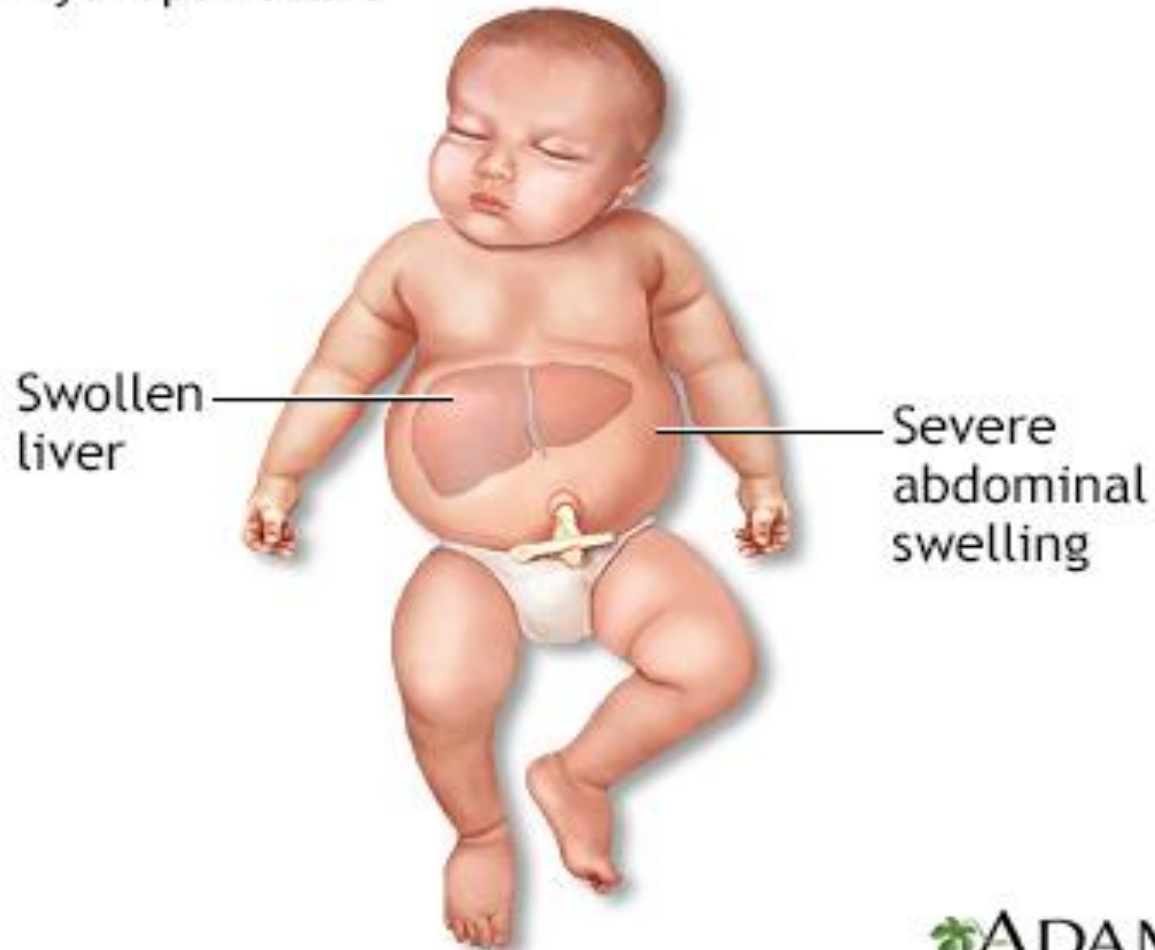


Down's syndrome features

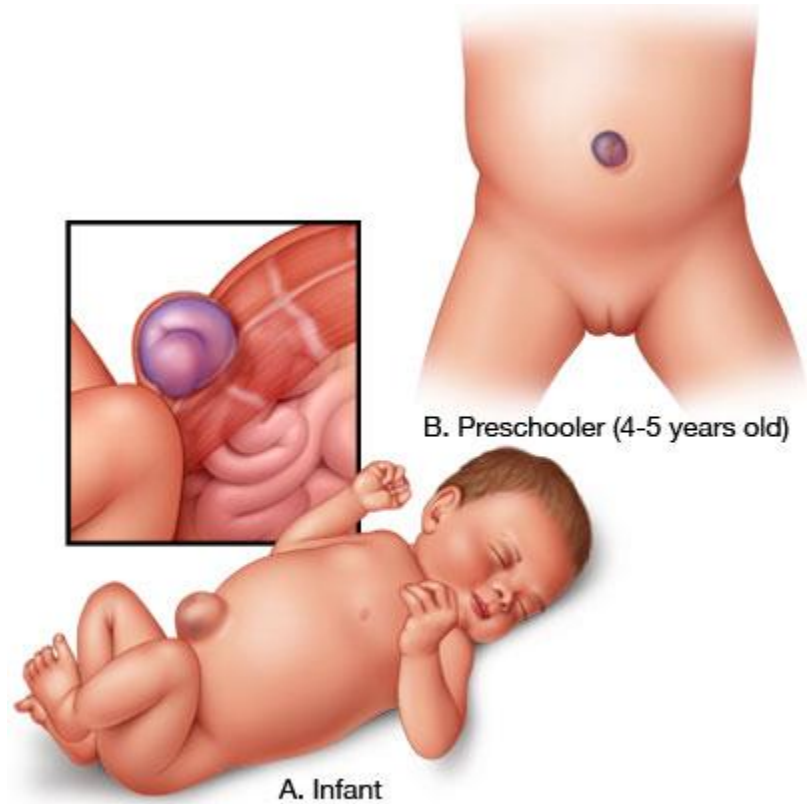
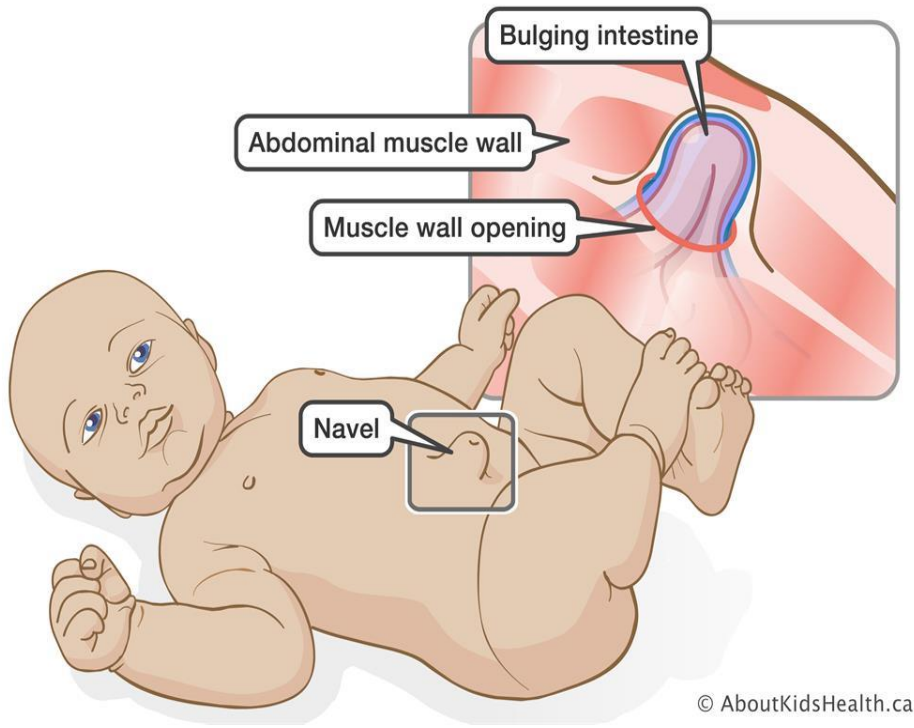


Abdomen

Hydrops fetalis



Umbilical hernia



Talipes/ club foot



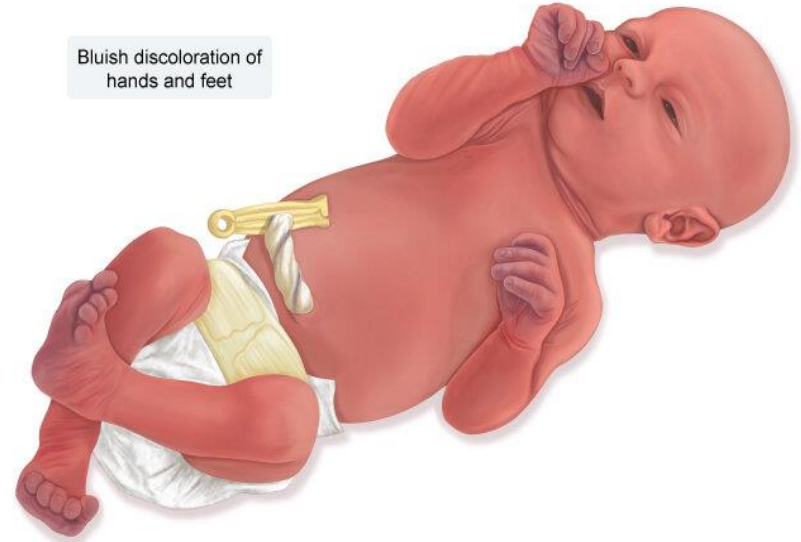
Normal

Clubfoot

Acrocyanosis

Acrocyanosis in newborns

Bluish discoloration of hands and feet



Reflexes - A part of Neurological assessment

Primitive reflexes

- ✓ Moro/ startle
- ✓ Rooting
- ✓ Sucking and swallowing
- ✓ Grasp reflex
- ✓ Step reflex
- ✓ Asymmetrical tonic neck reflex.
- ✓ Traction response

Protective reflexes

- ✓ Blinking and corneal reflexes
- ✓ Gag, cough & Sneezing reflex
- ✓ Yawning reflex
- ✓ Crying reflex

Moro/startle reflex

Reflex

- **Moro (startle) Reflex**

- Newborns fling arms and legs out, and pulls them back again when startled



The moro reflex



Rooting reflex



Sucking reflex



Grasp reflex – Palmar & Plantar

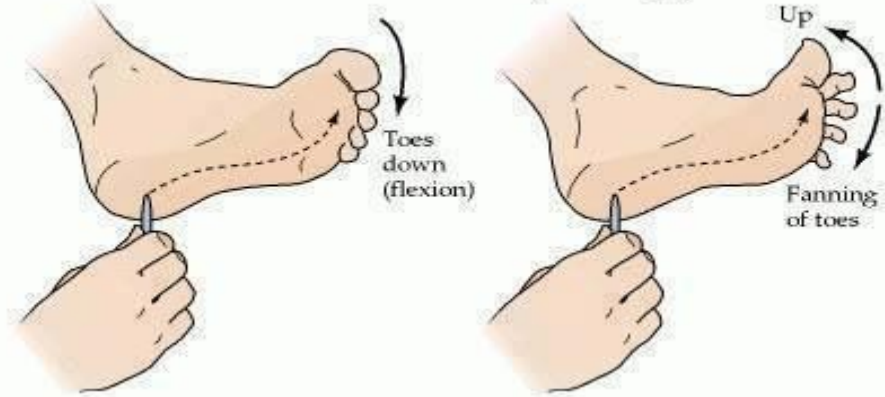


Asymmetric tonic neck reflex (fencing reflex)



(A) Normal plantar response

(B) Extensor plantar response (Babinski sign)



Protective reflexes

- ✓ **Blinking and corneal reflexes:-** Protects eyes from trauma and bright light
- ✓ **Sneezing and cough reflex:-** Used to clear throat and ensure clear airway
- ✓ **Yawning reflex:-** to draw additional oxygen
- ✓ **Crying reflex:-** helps to withdraw from painful stimuli

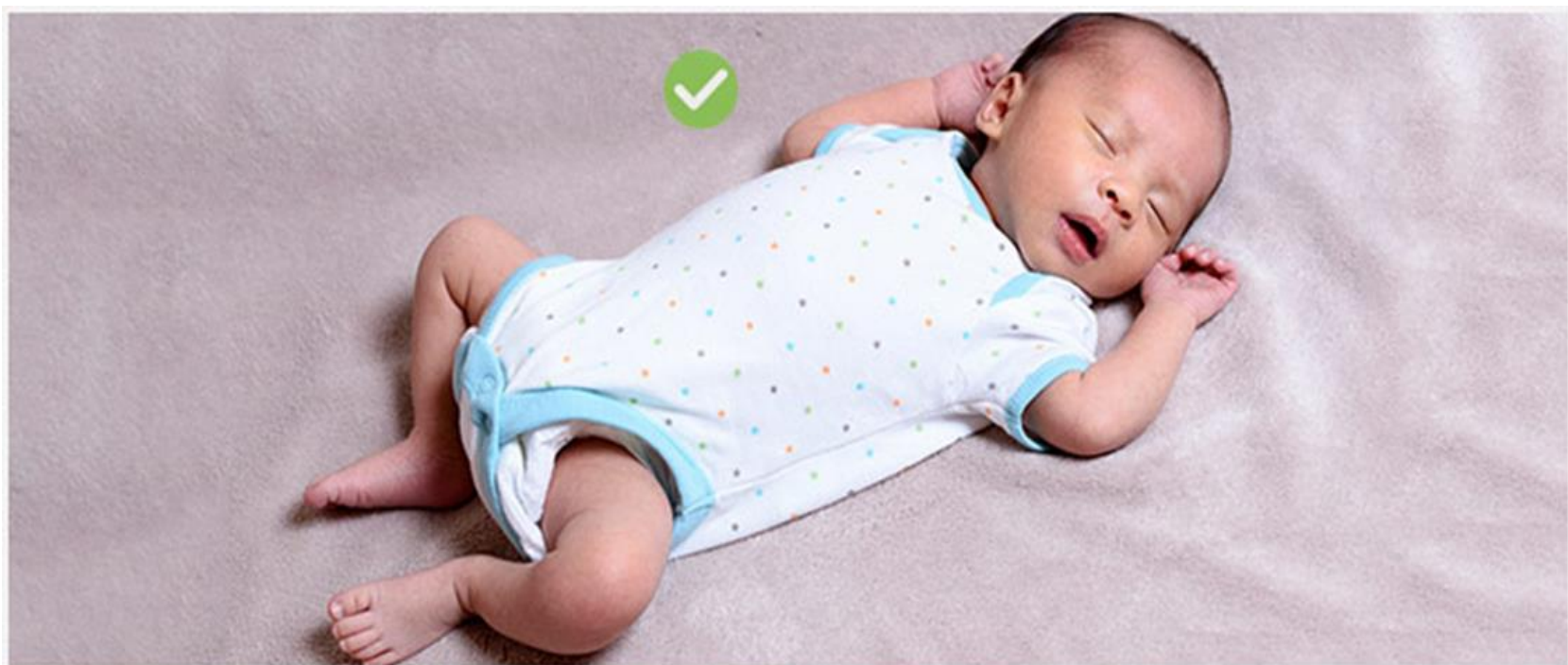
Subsequent care of the newborn

Principles of subsequent management of the neonate include:

- ✓ Maintenance of the established respiration
- ✓ Provision of nutrition
- ✓ Provision of warmth
- ✓ Protection from injury
- ✓ Prevention of infection
- ✓ Assessment of the progress of the baby
- ✓ Education of the mother on further care & Mx of the baby

1. Maintenance of the Established Respiration

- A normal baby should continue to breathe and maintain a good skin color without medical intervention.
 - A baby who tends to produce a lot of mucus should be closely watched and the airway suctioned PRN.
- Baby should be laid on his back with head turned to one side,
- Check respiration and color of baby regularly
- Avoid pillows and clothing over the face - may suffocate the baby.
- Make sure the mother does not lie on the baby – may suffocate



2. Provision of nutrition

- Early & Exclusive breastfeeding
 - Help mother to initiate breastfeeding within first hour of birth
- Demand feeding (baby-led breast feeding) is ideal and should be advocated.
- Encourage the mother to breast feed exclusively for 6 months (no need for additional fluids/water)
- To ensure that the baby gets both fore and hind milk, the mother needs to B/feed the baby on one breast until completely empty. Ensure;
 - *Good position*
 - *Good attachment*
 - *Effective suckling*

•

Breast feeding

To check attachment, look for:

- - Chin touching breast
- - Mouth wide open
- - Lower lip turned outward
- - More areola above than below the mouth

3. Provision of warmth

- Baby should be kept warm but do not overheat
- Prevention of hypothermia – observe for signs of cold stress
- Mothers should be taught about appropriate clothing for varied climates.
- They should dress the baby according to the change of environmental temperature.
- Baby wraps should be loose enough to allow for free movement of the legs and arms.

The “warm chain”

- **Def'n:** A set of inter-linked procedures to be undertaken at birth & during the next few hours and days, **to minimize heat loss in all newborns**
- **The warm-chain consists of 10 steps;**

Prevention of hypothermia: Warm chain

1. Warm delivery room (>25⁰ C)
2. Warm resuscitation
3. Immediate drying
4. Skin-to-skin contact
5. Breastfeeding
6. Bathing postponed
7. Appropriate clothing
8. Mother & baby together
9. Professional alert
10. Warm transportation

Kangaroo mother care (KMC)



KMC

Skin to skin contact with the baby; Not less than 1 hour at a time

Benefits;

- Provides warmth, promotes B/Feeding,
- Protects from infection
- Emotional bonding
- Physiological stability, reduces apnea
- *Useful for LBW infants*

4. Protection from injury

- Protect the neonate from the sun, wind, suffocation and injury
- Injuries may be inflicted by the long nails of the mother, midwife, the baby itself
 - Advice mother to cut the nails of the baby short to avoid scratching
- Advice mother on protection from home accidents like cuts, burns, scalds.
- The neonate's skin is fragile and easily bruised;
 - Irritants such as antiseptics, fabric softeners and starch are discouraged.
 - Creased hard fabrics, stool and urine may interfere with the skin integrity.

5. Prevention of infection

- Cleanliness at delivery reduces the risk of infection for the mother and baby, especially neonatal sepsis and tetanus.
- Cleanliness requires mothers, families, and health professionals to avoid harmful traditional practices, and prepare necessary materials.
- **Hand washing is the single most important step to be emphasized to both family members & HCWs**
- **The “clean chain”** is a series of actions that are used to prevent infection transmission to the newborn

The “clean chain”

- The '*Clean chain*' has to be followed both at the time of delivery and then till the time of discharge **to protect the infant from infections.**
- Composed of “Clean” components during delivery & after delivery

a) Clean delivery (WHO's six cleans)

1. Clean attendant's hands (washed with soap)
2. Clean delivery surface
3. Clean cord- cutting instrument (i.e. razor, blade, scissors)
4. Clean string to tie cord/ cord clamp
5. Clean cloth to cover the baby
6. Clean cloth to cover the mother

The “clean chain”

b) After delivery

1. All caregivers should wash hands before handling the baby
2. Feed only breast milk
3. Keep the cord clean and dry
4. Use a clean absorbent cloth as a diaper/napkin
5. Wash your hands after changing diaper/napkin.
6. Keep the baby clothed and wrapped with the head covered

Prevention of infection....

- Keep environment clean
- Provide separate items for baby use
- Restrict number of people/visitors handling the baby
- As much as possible, encourage the mother herself handle her baby to avoid infection,
- Staff with G/E or RTI should not enter baby unit
- Strict hand washing before handling the baby, and after changing their diapers
- Babies with infectious diseases should be isolated
- Top tailing is done until the cord falls off, then baby can be washed in water
- Immunization - protect the neonate from certain preventable diseases. *(BCG & OPV (at birth or within 2 wks))*

Infection prevention.....

- **The cord** should then be observed more closely.
 - ✓ It is best left exposed and mothers should be advised not to use any remedies on the cord since it predisposes to infection (*omphalitis*).
 - ✓ Discourage mothers from touching the cord.
- When the dry cord breaks off, it may leave a raw area. This may be cleaned with Chlorhexidine.
- ***Remember: If the cord fails to drop off by the sixth day, it may mean that there is an infection.***

6. Assessment of baby's progress

- The midwife should be able to determine that the baby is healthy and thriving.
- A baby who is healthy and growing is;
 - ✓ Active
 - ✓ Feeds well,
 - ✓ Free from infection and
 - ✓ Gains weight steadily.
- In order to observe these, it is necessary to examine the baby thoroughly at least once a day during bath time.

Daily general exam of the newborn

- It is the same as that done at birth but is more concerned with monitoring daily changes and detecting signs of infection.

Objectives

- i. Assess progress of growth and development
 - ii. Identify problems as they arise
- The following daily observations should be recorded in order to determine the baby's health status:
 - General appearance and activity
 - Exclude any discharge from the eyes and ears which may be an indicator of infection
 - The skin should be checked to detect the presence of jaundice, pallor or cyanosis, septic spots or sore buttocks
 - Check the mouth to exclude oral thrush

Observations

- The umbilical cord should be examined to ensure that it is drying up and is not septic
- Weigh the baby to determine weight gain
- Other general care measures include:
 - Observations, especially on respiration
 - Feeding patterns
 - Crying
 - Urinary output
 - Character of stool
- Document and report any abnormalities detected so that corrective measures taken early enough.

7. Education of the mother

Emphasis should be laid on the following:

- Personal hygiene and environmental hygiene
(Demonstrate baby bathing, diaper changing, care of feeding utensils)
- Exclusive breast feeding
- Attendance of post-natal clinic, family planning and child welfare clinics for immunization
- How to care for the baby (esp. if primigravidae);
 - Instruct mother not touch cord unnecessarily,
 - show them how to clean eyes or ears
 - Not to give un prescribed drugs or herbs to the baby
- Maternal nutrition

Education of mother.....

Danger signs to observe for;

- Change in baby's colour,
- Appearance of septic spots,
- Poor feeding habits,
- Excessive crying & irritability,
- Diarrhea and vomiting.

Mother should return to hosp. for assistance if she observes any of these

Questions

